

REMARKS

Claims 1, 2, 4, 9-15 and 17-23 are pending. Claims 1 and 23 are independent. By this Amendment, claims 1, 4, 12 and 23 are amended and claims 6 and 7 are canceled without prejudice. No new matter is involved.

Reconsideration of the Application, as amended, is respectfully requested.

Premature Final Rejection- Withdrawal of Finality of Office Action

The previous Office Action indicated that claims 14-22 contained allowable subject matter, and the only amendments to those claims had to do with making them clear and definite and had nothing to do with distinguishing over any applied art because no art had been applied against them.

Thus, Applicants' amendments did not necessitate making this rejection final. Accordingly, reconsideration and withdrawal of the finality of this Office Action are respectfully requested.

Moreover, because the finality of the outstanding Office Action should be withdrawn, entry of this amendment is proper.

Information Disclosure Statement

Applicant thanks the Examiner for reviewing the Information Disclosure Statement filed on April 2, 2009 and for providing an initialed copy of the Form PTO/SB/08 filed therewith.

Claim Objections

Claims 4 and 12 are objected to for minor informalities. Applicants have amended claims 4 and 12 to overcome these minor informalities.

Accordingly, reconsideration and withdrawal of these claim objections are respectfully requested.

Rejections under 35 USC §103

Claims 1, 6, 9 and 23 stand rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication 2003/0061956 to Tsukamoto in view of U.S. Patent 6,272,986 to Hess. Claims 2, 4, 7, 10 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsukamoto in view of Hess and further in view of U.S. Patent 6,006,665 to Stuchlik et al. Claims 12-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsukamoto in view of Hess and further in view of U.S. Patent 4,879,950 to Ishii. Claims 15, and 17-19 stand rejected under 35 USC §103(a) as being unpatentable over Tsukamoto in view of Hess and further in view of U.S. Patent 4,879,950 to Ishii and further in view of U.S. Patent 4,878,427 to Washchynsky et al. Claims 20-22 stand rejected under 35 USC §103(a) as being unpatentable over Tsukamoto in view of Hess and further in view of U.S. Patent 4,879,950 to Ishii and further in view of U.S. Patent 4,878,427 to Washchynsky et al. and further in view of U.S. Patent 4,373,444 to Cunningham. These rejections are respectfully traversed.

Independent claim 1, as amended, recites a printing module which comprises: a main frame; an impression roller being rotatably bearing-mounted in the main frame; a plate cylinder assembly having a plate cylinder that is provided with a print image and that, in use, with the

interposition of a substrate to be printed, abuts against the impression roller; an ink reservoir; a doctor roller configured to take up ink from the ink reservoir; an anilox roller being arranged between the doctor roller and the plate cylinder and configured to remove a desired amount of ink from the doctor roller and to transfer ink to the plate cylinder; a first subframe in which the plate cylinder is rotatably bearing-mounted and that is pivotably connected to the main frame through a first pivot for positioning the plate cylinder relative to the impression roller; a second subframe in which the anilox roller and the doctor roller are rotatably bearing-mounted and that is pivotably connected to the main frame through a second pivot for positioning, and setting a distance of, the anilox roller relative to the plate cylinder, such that a positioning change of the plate cylinder relative to the impression roller does not affect the positioning of the anilox roller relative to the plate cylinder and that a positioning change of the anilox roller relative to the plate cylinder does not affect the positioning of the plate cylinder relative to the impression roller.

Independent claim 23, as amended, recites a printing machine containing a printing module that comprises: a main frame; an impression roller being rotatably bearing-mounted in the main frame; a plate cylinder assembly having a plate cylinder that is provided with a print image and which, in use, with the interposition of a substrate to be printed, abuts against the impression roller; an ink reservoir; a doctor roller configured to take up ink from the ink reservoir; an anilox roller being arranged between the doctor roller and the plate cylinder and configured to remove a desired amount of ink from the doctor roller and to transfer ink to the plate cylinder; a first subframe in which the plate cylinder is rotatably bearing-mounted and that is pivotably connected to the main frame through a first pivot for the purpose of the positioning of the plate cylinder relative to the impression roller; a second subframe in which the anilox roller and the doctor roller are rotatably bearing-mounted and that is pivotably connected to the

main frame through a second pivot for the purpose of the positioning the anilox roller relative to the plate cylinder, such that a positioning change of the plate cylinder relative to the impression roller does not affect the positioning of the anilox roller relative to the plate cylinder and that a positioning change of the anilox roller relative to the plate cylinder does not affect the positioning of the plate cylinder relative to the impression roller .

Tsukamoto does not disclose a first subframe in which the plate cylinder is rotatably bearing-mounted and that is movably connected with the main frame for positioning and setting a distance of the plate cylinder relative to the impression roller. Instead, in the embodiment of Fig. 1, Tsukamoto's plate cylinder (16) appears to be bearing-mounted in the main frame (F). Accordingly, the plate cylinder is not bearing-mounted in a subframe that is moveable relative to the main frame, which would allow one to set the position/distance of the plate cylinder relative to the impression roller. In an alternative embodiment, the plate cylinder (16) may be supported in the main frame (F) by means of a support structure of the same type that is described for the fountain roll (13) (para.29). This support structure, however, does not comprise a subframe (e.g. an "interior frame F1") that is moveably connected with a main frame (F) for the purpose of positioning, and setting a distance, of the supported roll (here: the plate cylinder (16)) relative to anything else (here: the platen (17)). The disclosed support structure is merely configured for accurately holding any supported roll in a single mounted position relative to the main frame (cf. para.12); adjustment possibilities are not described, and do not seem possible.

In the embodiment of Fig. 1, Tsukamoto discloses a subframe (F1) in which the anilox roller (15) and the doctor roller (13) are rotatably bearing-mounted (Figs.1-2; para.28). This subframe, however, is not moveably connected to the main frame (F), nor is it movably

connected to any other subframe for positioning, and setting a distance of, the anilox roller relative to the plate cylinder. In contrast, and as discussed above, the disclosed support structure is configured for accurately holding an individual roll in a single mounted position.

Thus, in short, the printing device (10) disclosed by Tsukamoto discloses a number of bearing-mounted rollers (13, 15-17), each of which has a fixed position relative to any other.

However, Applicants' independent claims recite a combination of features including (1) a first subframe in which the plate cylinder is rotatably bearing-mounted and that is pivotably connected to the main frame through a first pivot for positioning the plate cylinder relative to the impression roller; and (2) a second subframe in which the anilox roller and the doctor roller are rotatably bearing-mounted and that is pivotably connected to the main frame through a second pivot for positioning, and setting a distance of, the anilox roller relative to the plate cylinder.

Unfortunately the Office Action completely fails to indicate where Tsukamoto discloses there two positively recited pivots and pivot features. In fact, there is no mention whatsoever of Tsukamoto having a pivot in the rejection of claims 1 and 23.

The rejection of claim 6 does mention a pivot only with respect to Hess, the secondary reference, stating that the movable connection between Hess' main frame 62 and a first subframe 80 is a pivot P.

Hess discloses using its pivot P to move the plate cylinder 81 toward and away from the impression cylinder 34 (col. 9, lines 30-50). Unfortunately, the manner in which Tsukamoto is supposed to me modified by Hess is unclear, the rejection merely concluding that it would be obvious to apply the teachings of Hess to make the frame F of Tsukamoto movable to allow it to

lift the anilox and plate cylinders away from the impression cylinders to allow for changing of a printing plate in an idle state.

Moreover, Applicants respectfully submit that Tsukamoto does not need to be modified as suggested to work properly, because Tsukamoto is already configured to permit removal of its fountain roll 13 and its anilox roll 15 by axially moving shaft 45, and the proposed pivoting arrangement of Tsukamoto's frames F and F1 would result in spilling of the ink in open ink pan 11, thereby rendering the proposed modified version of Tsukamoto inoperative. Thus, these two references teach away from being combined, as suggested.

To establish a *prima facie* case of obviousness, one must show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071 at 1074, 5 USPQ2d at 1780 at 1783. There is no suggestion to combine, however, if a reference teaches away from its combination with another source. *See id* at 1075, 5 USPQ2d at 1599. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant . . . [or] if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). If when combined, the references "would produce a seemingly inoperative device," then they teach away from their combination. *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969); *see also In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (finding no suggestion to modify a prior art device where the modification would render the invention obvious).

Accordingly, Applicants respectfully submit that one of ordinary skill in the art would have no proper incentive to make the proposed modification of Tsukamoto in view of Hess to provide a first pivot, as claimed because these references are so configured so as to teach away from the proposed modification of Tsukamoto in view of Hess.

Turning to the rejection of claim 7, which recites a second pivot feature (now recited in amended claims 1 and 23), the Office Action relies, additionally, on Stuchlik, which has a significantly different configuration than either Tsukamoto or Hess. Stuchlik is configured such that its plate cylinder 18 and impression roller 22 are mounted together in support housing 12, and its ink supply assembly 14 is a separately mounted unit with a support housing having end plates 28 and 30, and Stuchlik shifts its ink supply assembly 14 about pivot rod 48, which extends through ink supply assembly end plate 30 and housing 12, to shift the anilox roller 16 toward and away from plate cylinder 18.

Applicants respectfully submit that this proposed modification of Tsukamoto by Stuchlik suffers from the same obvious deficiency that the proposed modification of Tsukamoto in view of Hess does, because this proposed modification will also result in spilling of the ink from Tsukamoto's open ink supply tray 11, and an inoperative device.

Additionally, Applicants respectfully submit that it is improper to modify Tsukamoto in view of these two significantly different structurally configured secondary references, to arrive at a plural pivot configuration where Hess pivots different printer rolls than does Stuchlik, and where one reference leaves the printer roll stationary and the other moves the printer roll, resulting in a contradiction and a device that clearly would be inoperative.

Thus, the proposed combinations of Tsukamoto and Hess and Tsukamoto and Stuchlik are fundamentally improper in and of themselves, and when combined, as suggested in the rejection of previously pending claim 7.

Accordingly, the rejections of record of claims 1 and 23, modified to include features of claims 6 and 7, fails to make out a *prima facie* case of obviousness of the claimed invention.

In addition to the previous discussion of the outstanding rejections, Applicants provide the following remarks which are directed to the Hess reference.

Hess discloses a retractable printer-coater adapted to be installed on a printer station of a lithographic press. The Hess printer-coater prints an image onto a surface of a substrate passing over an impression cylinder of the printing station after being lithographically printed thereon.

The Hess printer-coater (10) has a flexographic printhead (58) which, in turn, includes a main frame (62) and a secondary frame (80). The main frame of the printhead is connected to a pair of retractable arms (56) that raise and lower the printhead between a raised storage position and a lowered operating position. The secondary frame (80) holds a plate cylinder (81) and an anilox roller (92) mechanism, and is pivotable relative to the main frame to move the main cylinder into and out of contact with the impression cylinder (36) of the printing station (24) when the main frame is in its lowered position, as disclosed in col. 4, lines 16-21 of Hess. Within the secondary frame (80), the position of the anilox roller (92) is adjustable relative to the position of the plate cylinder (81) to slidably move the anilox roller between an “on” impression position and an “off” impression position with respect to the plate cylinder, as disclosed in col. 11, lines 15-40, with respect to Fig. 5 of Hess.

With respect to amended claim 1, Hess only discloses some features thereof, including a printing module, e.g., printing station 24 with printer coater 10 mounted thereon, comprising:

a main frame ("press frame 14", "housing 54", "main frame 62") (Fig.1); an impression roller (36) being rotatably bearing-mounted in the main frame (Fig.1);

a plate cylinder assembly having a plate cylinder (81) that is provided with a print image (84) and that, in use, with the interposition of a substrate (F) to be printed, abuts against the impression roller;

an ink reservoir (Fig.2; 106);

an anilox roller (92) configured to take up ink from the ink reservoir (106) and configured to transfer ink to the plate cylinder (81; Figs. 5, 6);

a first subframe ("secondary frame 80") in which the plate cylinder (81) is rotatably bearing-mounted (col.9, ln.36-37) and that is movably connected with the main frame (14, 54, 62) (via "pivot point P") for positioning, *and* setting a distance, of the plate cylinder assembly relative to the impression roller (36) (col.9, ln.41-43);

a second subframe ("sliding block 150") in which the anilox roller (92) is rotatably bearing-mounted and that is movably connected to the first subframe (80) for positioning, and setting a distance of the anilox roller relative to the plate cylinder (col.11, ln.14-40),

such that a positioning change of the plate cylinder (81) relative to the impression roller (36) does not affect the positioning of the anilox roller (92) relative to the ^{plate} cylinder and that a positioning change of the anilox roller relative to the plate cylinder does not affect the positioning of the plate cylinder relative to the impression roller.

However, Hess does not disclose a separate doctor roller configured to take up ink from the ink reservoir.

Nor does Hess disclose additional features of amended claims 1 and 23, of two subframes that are independently pivotable relative to a main frame around two distinct pivots. None of the prior art documents discloses such a construction.

Furthermore, as can be seen through comparison of the present invention (see in particular Fig. 8 of the present application) with the teachings of, inter alia, Hess, the fact that the anilox roller and the plate cylinder are independently pivotable relative to a main frame allows for a compact construction not taught by any combination of the cited art documents, which construction achieves the object of the present invention as stated in the last itemized clause of claim 1.

Applicants also note that amended claim 1 recites two subframes that are independently pivotable relative to a main frame around two distinct pivots. None of the applied art, including Tsukamoto and Hess, discloses or suggests such a construction.

Hess, for example, discloses a configuration wherein a “plate cylinder 81” and an “anilox roller 92” – both mounted in a “secondary frame 80” – are pivotable around a same pivot point “P”.

The Hess anilox roller is further slidably mounted in the secondary frame (col.11, ln.14-40) such that its position relative to the plate cylinder may be set as desired.

Applicants respectfully submit that a fair, balanced evaluation of Hess reveals that its configuration is so structurally different from Tsukamoto, that one of ordinary skill in the art would not have any proper incentive to look to it to modify Tsukamoto.

Moreover, neither Hess nor Tsukamoto disclose or suggest a printing module which has two subframes that are independently pivotable relative to a main frame around two distinct pivots, nor do Hess or Tsukamoto. So, no matter how these two references are combined, they will still be missing this positively recited feature.

Accordingly, the Office Action does not make out a *prima facie* case of obviousness of the claimed invention recited in independent claims 1 and 23, and/or in any of the pending claims which depend from claim 1.

Reconsideration and withdrawal of these rejections of claims 1, 6, 9 and 23 are respectfully requested.

Claims 2, 4, 7, 10 and 11 stand rejected under 35 USC §103(a) as being unpatentable over Tsukamoto in view of Hess and further in view of U.S. Patent 6,006,665 to Stuchlik et al. ("Stuchlik"). Claims 12-14 stand rejected under 35 USC §103(a) as being unpatentable over Tsukamoto in view of Hess and further in view of U.S. Patent 4,879,950 to Ishii. Claims 15 and 17-19 stand rejected under 35 USC §103(a) as being unpatentable over Tsukamoto in view of Hess and Ishii and further in view of U.S. Patent 4,878,427 to Waschynsky. Claims 20-22 stand rejected under 35 USC §103(a) as being unpatentable over Tsukamoto in view of Hess and Ishii and Waschynsky and further in view of U.S. Patent 4,373,434 to Cunningham. These rejections are respectfully traversed.

Claims 2, 4, 7, 10-14 and 17-22 depend from claim 1, which is not rendered obvious by the main reference combination used in these rejections and, therefore, these dependent claims are not rendered obvious by Tsukamoto in view of Hess.

Moreover, none of the additional references, i.e., Stuchlik, Ishii, Washchynsky and Cunnington, is applied to remedy the aforesaid shortcomings of the Tsukamoto-Hess reference combination.

So, even if, solely for sake of argument, one of ordinary skill in the art were properly motivated to modify the Tsukamoto-Hess reference combination as suggested, the so-modified version(s) of the Tsukamoto-Hess reference combination would still not render obvious the claimed invention which recites a combination of features including a first subframe in which the plate cylinder is rotatably bearing-mounted and that is pivotably connected to the main frame through a first pivot for positioning the plate cylinder relative to the impression roller; and a second subframe in which the anilox roller and the doctor roller are rotatably bearing-mounted and that is pivotably connected to the main frame through a second pivot for positioning, and setting a distance of, the anilox roller relative to the plate cylinder, such that a positioning change of the plate cylinder relative to the impression roller does not affect the positioning of the anilox roller relative to the plate cylinder and that a positioning change of the anilox roller relative to the plate cylinder does not affect the positioning of the plate cylinder relative to the impression roller.

Accordingly, reconsideration and withdrawal of these rejections of claims 2, 4, 7, 10-14 and 17-22 are respectfully requested.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Also, because the outstanding Office Action was improperly made final, its finality should be withdrawn and the amendments entered as a matter of right. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

By


Paul C. Lewis
Registration No.: 43,368
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant